

Source Control Document.

Model: HVI 2K-750/24-3U3-S5037

COSD: 8N14-1 (8N14-2, 8N14-3)

Summary Description: 2000W, Industrial Quality DC/DC Converter
750Vdc to 24V/83A

Customer Name: GE Energy Storage/USA

Customer Part Number: Same as above

Product Description:

This rugged, industrial DC/DC converter is built with one FID 2000 and two KHI 1200 internal modules to generate the required output power. Cooling is by built-in fans, which suck air into the unit and push it out at the other end through perforations. Ruggedizing and conformal coating provide added immunity to shock, vibration and humidity. Low component count, large headrooms and the use of components with established reliability results in high MTBF.

Special Features: Conformal coating



SPECIFICATIONS

Input Voltage

750Vdc nominal
550-850Vdc operating range
Input current: 4.5A max.

Input Protection

Inrush current limiting
Varistors
Reverse polarity protection
Internal safety fuse
Lower voltage than the specified minimum input will not damage the unit

Isolation

2250Vdc input to chassis
4300Vdc input to output
5600Vdc type testing
8mm spacing
500Vdc output to chassis

Standards

Designed to meet EN60950-1 and corresponding standards

EMI

EN 55022 Class A with margins

Switching Frequency

55kHz \pm 3kHz

Output Voltage/Current

24Vdc \pm 0.3V / 83A
2KW continuous
Output is floating; either terminal can be grounded

Output Separation Diode

Installed internally for separation for the internal modules

Line/Load Regulation

\pm 2% combined from zero load to full load including separation diodes

Dynamic Response

Max 5% voltage deviation for 10% to 50% load step, with better than 1msec recovery time

Output Ripple/Noise

Better than 60mVrms and 300mVpp (@ 20MHz BW)

Output Overload Protection

Rectangular current limiting with short-circuit protection (no hiccup)
Thermal shutdown in case of insufficient airflow (self-resetting)
Current Limit: 89A \pm 4A

Output Over-voltage Protection

Second regulator loop, completely stable and independent of main regulator loop
OVP limit: 27V \pm 2V

Efficiency

80% at full load

Operating Temperature Range

-20°C to +55°C for full specification

Temperature Drift

0.03% per °C over operating temperature range

Cooling

By built-in high quality fans

Environmental Protection

Basic ruggedizing
Conformal coating

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5-95% non-condensing

MTBF

85,000 hours @45 °C
(Fans not included)

Indicators

Green high intensity OUTPUT ON LED on each internal module visible through the rear perforation

Alarm Output

Not installed

Package/ Dimensions (WxHxL)

3U3: 187 x 132 x 407mm
(7.4" x 5.2" x 16")
Mounting holes are clear

Weight

6.2kg (13.5 lbs)

Connections


Input: Terminal block, PHOENIX H.V assembly
Output: Threaded studs M6

RoHS Compliance

Not required, but accepted

Warranty

Two years subject to application within good engineering practice
Contamination related failures and shipping cost excluded

Originated by NH/st	Date Sept 10, 2015
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